The Ethic

Pollution Prevention
The Environmental Ethic of the Nation.

Fall 2000

National Crane Reduces Waste

——Ron Eriksen

National Crane Corporation in Waverly had a problem. Much of the paint the company used contained large amounts of metals and other compounds that our landfill would not accept. National Crane had to send this paint related waste (filters and paint booth over-spray) to a facility in Rosemont, Minnesota, for land disposal. Shipping the material to Minnesota resulted in high transportation costs, increases in air pollution due to vehicle emissions, and higher risks of transportation related spills and accidents.

The company substituted products to reduce the concentrations of metals in the paints that they are using. Eventually, National Crane was able to reduce levels to the point where the waste contained small amounts of metals, often no metals at all, and no leachable volatile or semi-volatile organic compounds such as xylene and methylethylketone.

National Crane then contacted the Lincoln–Lancaster County Health Department to see if the waste material currently being generated was acceptable for land disposal in Lancaster County. The Health Department and Public Works and Utilities reviewed the process and materials involved as well as laboratory test results provided by National Crane. It was determined that the material could be handled at Bluff Road Landfill with no risk to employee or public health or the environment. Environmental personnel at National Crane estimate that they will save approximately $10,000 in disposal costs per year by reducing the toxicity of the paints used during the manufacturing process.

For more information about National Crane's success, contact Nick Krajicek at (402) 786-6392.

J J J

Green Business

The Lincoln–Lancaster County Health Department (LLCHD) has received a grant from the Nebraska Environmental Trust Fund (NETF) to begin an innovative program called *Pollution Prevention Through Green Business*. This program will recognize and reward businesses that do the right thing environmentally. It will also encourage businesses to do more than they currently do, no matter how well they are doing now.

The LLCHD grant is unique because it will help *small* businesses achieve environmental excellence, reduce waste, save money, and minimize regulatory burden. Businesses accomplish these goals not only by complying with environmental regulations but also by doing more than the regulations require—to go beyond compliance.

This program is also unique in that a steering committee of small business owners will establish the criteria necessary to become a Green Business. The committee will also determine the incentives, rewards, and recognitions for becoming Green Businesses. The following business leaders will serve on the steering committee:

Ken Svoboda	Ray's Lawn and Home Care Service
Stephen Kurchar	Rivers Metal Products
Sue Quambush	A to Z Printing
Mark Schneider	Lincoln Carpet Center
George Witt	George Witt Service, Inc.
Steve Hatten	Paragon Sanitation
Scott Haes	Haes Contracting
Craig Sparks	Custom Auto Care
Elaine Gilmore	Ag Equipment Sales, Inc.

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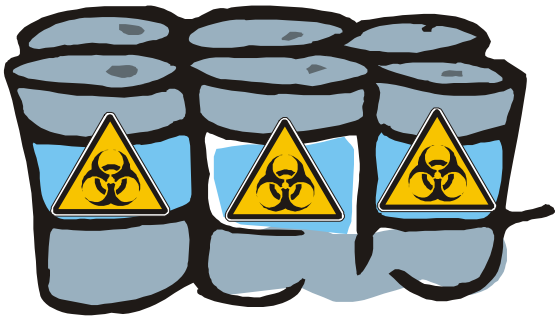
Managing Acids and Bases

Acids and bases, and the wastes that come from them, are often referred to as ***characteristic hazardous wastes*** because they have the hazardous characteristic of being corrosive. Highly acidic solutions (pH less than or equal to 2) and highly basic solutions (pH greater than or equal to 12.5) can be dangerous to human health and the environment. The risks posed by these materials can be reduced if employees use the correct storage, labeling, and disposal techniques.



Storage

Acids and bases should be stored:

- in sturdy, leakproof, and tightly closed *plastic or glass* containers.
- on diked, impermeable surfaces.
- using secondary containment practices (see LLCHD fact sheet "Secondary Containment").
- separately from solvents and other wastes; do not mix them with these other materials.

Labeling

Risk can be reduced by proper labeling of containers. Containers holding acids or bases or their wastes should be labeled as:

- hazardous, and
- corrosive.

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MSDS: A lifesaver

Required by Law

One of the most important documents in a business's file is the Material Safety Data Sheet (MSDS). This document contains information about how to store, use, and dispose of a material. Businesses are required to have copies of an MSDS on file for each chemical or hazardous material they purchase, store, and use.

The Department of Labor's Occupation Safety and Health Administration (OSHA) rule 29 of CFR 1910.1200 governs MSDSs. Manufacturers must provide MSDSs to their customers. Employers must ensure that employees have access to MSDSs for all materials stored or used on site. In case of an emergency, fire fighters and hazardous materials (HAZMAT) response teams will need the information contained on an MSDS.

Basic MSDS Information

The first section of an MSDS usually contains information about the product's manufacturer. This section includes the product or trade name of the material and the product code number. Many MSDSs include a generic product class such as "cleaning solvent" or "lubricating oil."

The section that is generally entitled "hazardous information" or "regulatory information" lists the toxic or hazardous ingredients. Usually these ingredients are given as percents by weight. This section

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Managing Acids and Bases—continued from page 2.

Disposal

Outside of accidents, disposal poses the greatest risks to human health and the environment. The following guidelines can help businesses dispose of these wastes properly.

Acids and bases may be combined to neutralize each other. After they are neutralized, it may be possible to dispose of them in a sanitary sewer. Contact your local waste water treatment plant to obtain approval, guidelines, and regulations. In Lincoln, call 441-7961.

Don't mix acids or bases with other waste streams. Mixing these materials could cause dangerous reactions. The presence of acids or bases would contaminate other, nonhazardous wastes making them hazardous adding to your waste disposal costs.

POLLUTION PREVENTION OPTIONS

The best option is the one that produces no waste at all. This option is called pollution prevention (P2) or waste reduction. Due to their caustic nature, acids and bases do not easily lend themselves to P2 options. Nonetheless, there are a few things businesses can do to reduce the amount or the hazardous nature of these wastes.

- Buy only the amount you need and use all that you buy.
- Reuse solutions until they are spent or too contaminated.
- Use an acid recovery system—such as an ion exchange or crystallization system—to reduce the amount of acid entering a waste stream.
- Modify operations to eliminate the need for acids or bases, if possible.

Other companies might need an acid or a base that you want to discard. Contact the Keep Nebraska Beautiful Materials Exchange Program at (402) 486-4622 or (402) 486-4562 or outside Lincoln at (800) 486-4562.

Many businesses need to use acids or bases in their daily operations. There is no way to eliminate the risks these materials pose completely. Nonetheless, with forethought, planning, training, and proper purchasing, businesses can reduce most of these risks and hazards.

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MSDS: A lifesaver—continued from page 2.

generally includes the material's Chemical Abstract Service (CAS) number. A CAS number is a universally recognized "code"; a material can have dozens of brand or product names but only one CAS number.

IDENTIFYING EMISSIONS

The above information is used to identify what hazardous air pollutants (HAPs) and how much of each HAP a product contains. These HAPs are the sources of environmental pollution and oise a risk to public health. Knowing what HAPs a product contains helps emergency response personnel handle an accident.

The amount of HAPs listed on an MSDS helps a business determine its status for air emissions permits. A business owner must add up the emissions for each *individual* HAP. Then the owner must calculate the total amount of *all* HAPs emitted in a year. If a business emits more than 10 tons of a single HAP or more than 25 tons of all HAPs in a year it is a regulated source and must obtain a permit from state and/or local officials.

Another section of the typical MSDS, "Physical or Chemical Properties," describes the product in terms of boiling point, vapor pressure, specific gravity, and percent of Volatile Organic Compounds (VOCs) or VOC density. VOCs react with sunlight to form smog, acid rain, and other types of air pollution. Both HAPs and VOCs are regulated by the Clean Air Act.

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How to use an MSDS

Information on an MSDS can guide businesses to P2 alternatives. An MSDS can help technical assistance providers recommend alternatives. Replacing materials that are high in HAPs or VOCs with materials that have fewer or no HAPs or VOCs creates a safer work place and protects our environment.

MSDSs contain safety precautions. They describe the health and safety risks posed by the material, the proper methods for clean up and handling, the correct first aid procedures, and the protective equipment that is needed. Following the instructions on an MSDS can save lives and protect human health.

Keep all MSDSs in one location, preferably in a binder to which everyone has access. Periodically ask manufacturers for the most current MSDSs. The materials in a product might change, and you should have the most current information.

MSDSs can save lives.

J J J

Green Business—continued from page 1.

Rod Magnuson	Rod Magnuson Painting
Mike White	Dr. Vinyl Dent Depot No. 2
Randy Baldwin	Baldwin's Automotive
JR Stelzer	JR Stelzer Company
Nadine Codello	Home Builders Association of Lincoln
Ken Westerhold	K-West Construction
Joe Delgado	TWC Construction
Mike Little	Voss Lighting
Carl Rohman	Hangers
Steve Rohman	Uniservice
Dan Davison	Quik-T's
Deloy Stark	Bryant Air Conditioning and Heating
Sue Kliment	Jim Defreece Auto Parts
Jerry Placzek	Williamson

The Steering Committee's first meeting was September 21, 2000.

For more information about the Pollution Prevention Through Green Business program or to serve on the Steering Committee, call Beth Mann (402) 441-6235 or Harry Haefer (402) 441-8035.

J J J

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http://www.ci.lincoln.ne.us/city/health/environ/pollu/

Please circulate this issue among your staff and coworkers.

The Ethic is published quarterly by the Lincoln-Lancaster County Health Department and is distributed to Special Waste Permit holders and other businesses in Lincoln and Lancaster County.

For more information or for P2 technical assistance, call 441-8040.

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